

AGENDA

A public meeting of the City of Altoona Zoning Hearing Board will be held on Wednesday, **September 13, 2023 at 1:15 p.m.** in the 4th Floor Conference Room at City Hall, 1301 12th Street, Altoona, Pennsylvania.

2216 Pleasant Valley Blvd/ 2B Development LLC

Request to install a digital/marquee sign onto the existing freestanding sign in a Single-Household Residential Zone, §800-63.

800 N 4th Ave/ Groundhog Solar LLC

Request to operate an outdoor showroom for a solar panel installation business in a Central Business Commercial Zone, Code 800-55(E).

1301 12th Street, Suite 103
Altoona, PA 16601
Phone (814) 949-2456
Fax (814) 949-2203



DEPARTMENT OF CODES AND INSPECTIONS

ZONING APPEAL APPLICATION – ALTOONA PLANNING CODE

(instructions located on reverse side)

PROPERTY LOCATION: 600 N. 4th Ave
PURPOSE OF APPEAL: prior appeal expired while Gary heard development
DESCRIPTION OF PREMISES: empty lot
USE OF PREMISES: out-door showroom
OFF-STREET PARKING: 2

Please fill in all portions below, "same" and "non-applicable" if needed

PROPERTY OWNER INFORMATION

Name: Richard Flarnd (Groundhog Solar LLC)
Address: 209 W 15th Ave
Phone: 814-931-2750 Email: richardflarnd@yahoo.com

APPLICANT INFORMATION:

Name: same
Address: _____
Phone: _____ Email: _____

DESIGN PROFESSIONAL INFORMATION

Name: same + Ken Szala
Address: _____
Phone: _____ Email: _____

SIGNATURE OF APPLICANT: [Signature] DATE: 8-24-23

OFFICE
USE
ONLY

| | | | | |
|---|----------|--|----------|---|
| <input type="checkbox"/> VARIANCE | \$500.00 | <input type="checkbox"/> APPEAL DETERMINATION | \$500.00 | <input checked="" type="checkbox"/> OTHER |
| <input type="checkbox"/> SPECIAL EXCEPTION | \$500.00 | <input type="checkbox"/> APPEAL VIOLATION NOTICE | \$500.00 | |
| PREVIOUS APPEAL TO ZONING HEARING BOARD? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN | | | | |
| SECTIONS AND PROVISIONS OF ZONING ORDINANCE RELIED UPON: <u>Missed Six Month Deadline</u> | | | | |

Zoning Appeal/Variance Request
800 N. 4th Ave, Altoona, PA

This is a request to allow a unique business to occupy and develop a vacant lot that has very limited potential for any other business. Groundhog Solar would like to build an out-door showroom where several different styles of solar ground-mount systems can be displayed. Solar is new to most people, and simply showing pictures of what something could look like is not an effective way to sell an unfamiliar product that cost tens of thousands of dollars. Neither is it appropriate to take potential customers to the homes of former clients to see their built systems. This proposed use is a great use for the vacant lot in question and will benefit the city of Altoona.

The lot in question is a corner lot of about 100' x 100'. However the lot has been made irregular in shape due to the 2010 PennDOT project to widen the intersection of 4th Ave and N. 8th street. PennDOT took about 25% of the land for this project. More importantly, because the two roads making up the intersection are busy roads, The city has made it clear that no curb cuts would be allowed from the lot to one of the two roads (4th ave or N. 8th street). The alley here is in very bad shape and certainly cannot support heavy traffic.

The proposed use of an outdoor showroom would result in very little traffic. Most potential customers would likely just drive by, or look at the systems while stopped at the traffic light. Some will drive into the alley and look more carefully, and a few would likely park and walk around the site for a very close look. It may be helpful to know that Groundhog Solar is the 25th largest Solar Installer in Pennsylvania and currently builds fewer than 50 of these ground-mount structures per year. Thus it seems reasonable to expect that the traffic resulting from this proposed use would be something like one car per day. Any other business would have traffic that is many orders of magnitude greater which would be a problem for the limited access this site allows, even if that business could physically fit in this small lot.

This site has been vacant for a long time (around 20 years) and no businesses have attempted to develop the site. This is due to the physical constraints above that were exasperated by the PennDOT expansion in 2010. This this lot clearly meets the conditions laid out in Section 910.2. This particular proposed use will not change the character of the business district. As a structure, the solar arrays that are proposed would all be allowed in this area as an accessory structure. No change to setbacks or heights are being requested except that there is a maximum front setback that is very small. It is asked that a larger front setback be allowed in this case so that traffic line-of-sight is not adversely affected along either road. This particular variance, allowing an unlisted use to be permitted, is the minimum variance that allows this property to be used as is evidenced by the long vacant status of the property and that it is inconceivable that permitted businesses could use this property without variances themselves.

Other aspects of the proposed use:

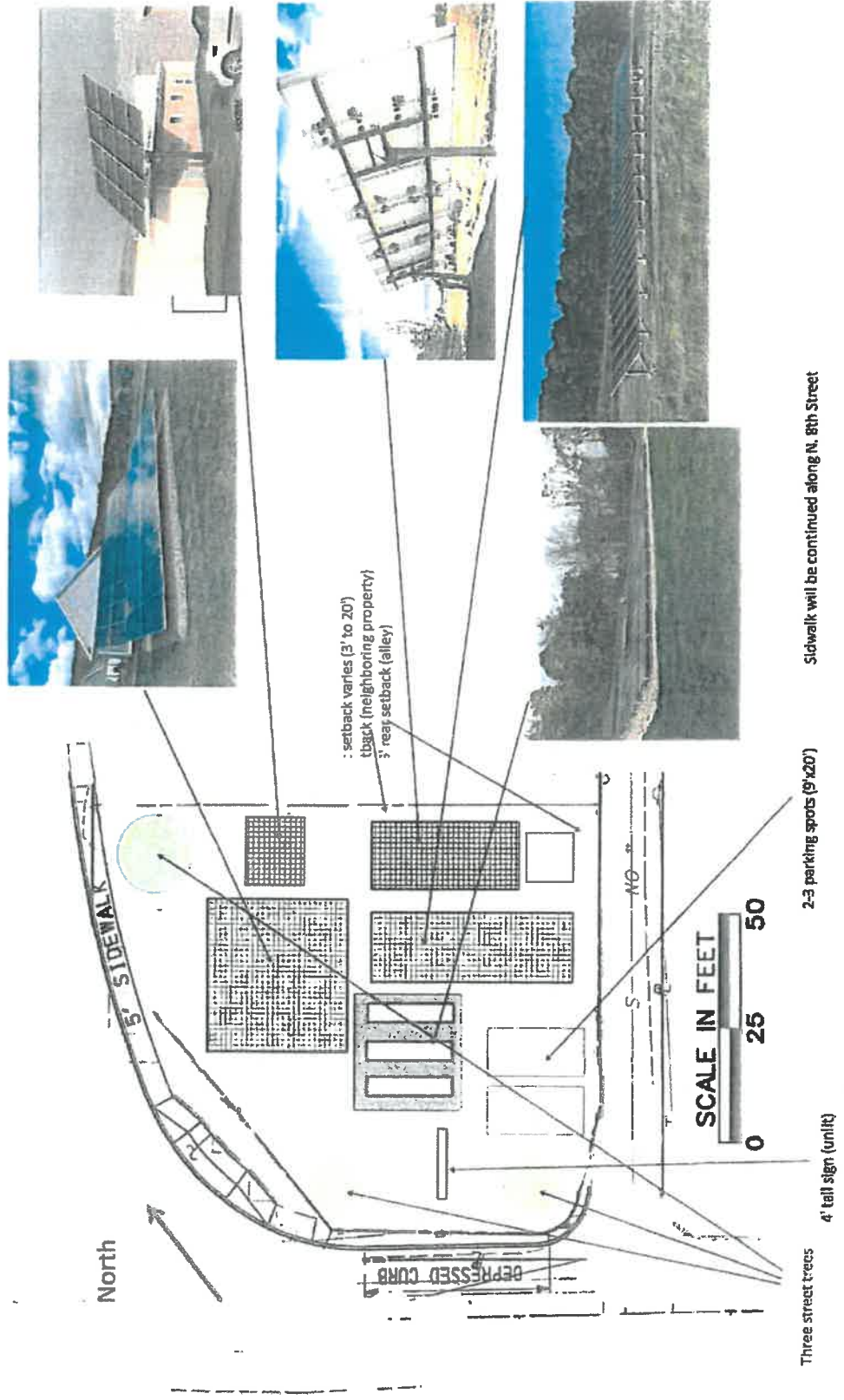
Because this will be an outdoor showroom for an expensive product, the City can be assured that it will be well landscaped and well-kept simply because that is good business. There will be

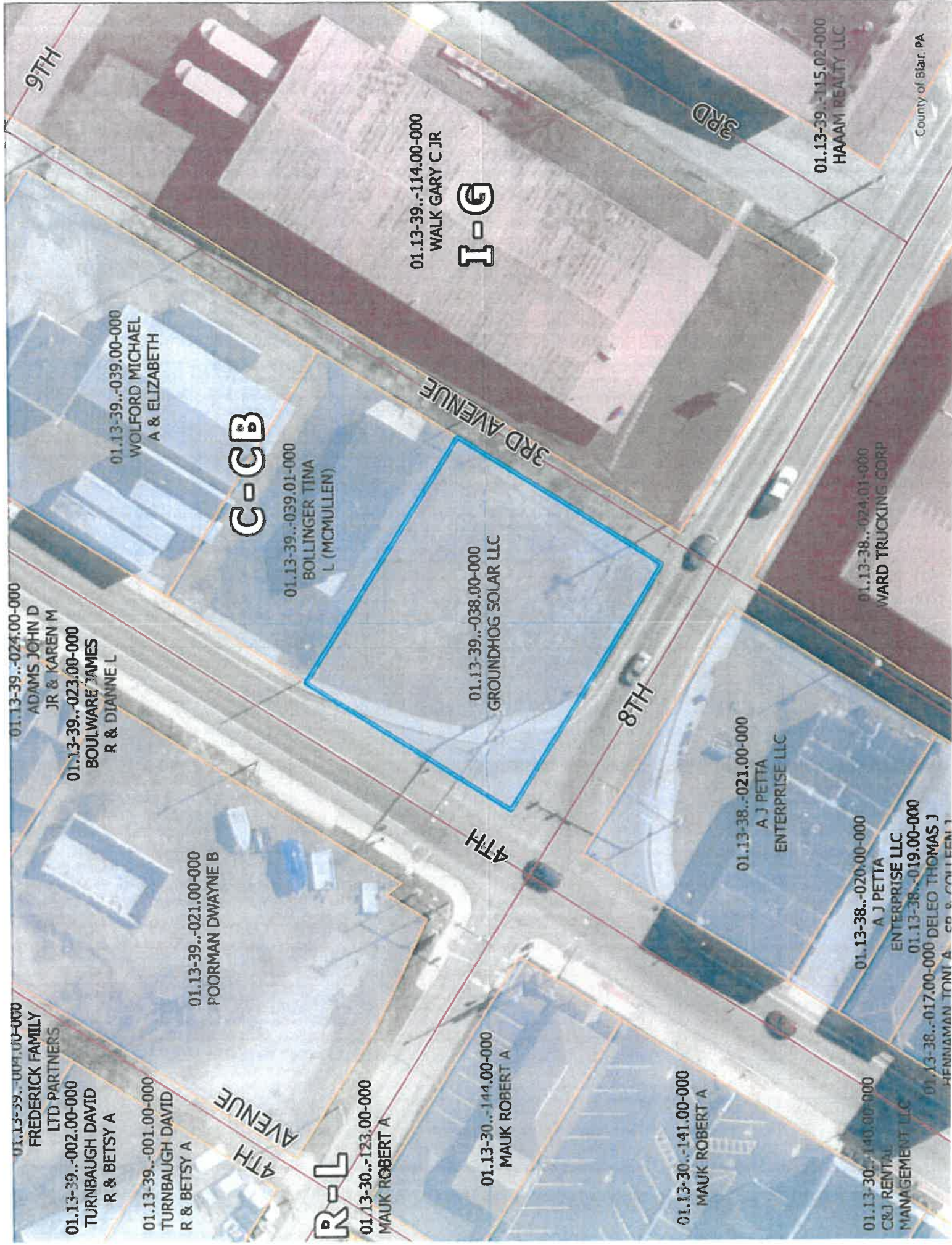
a small shed on the site to house lawncare equipment. Some of the arrays to be on display are intended to be screened behind shrubbery, so that will be done for the display systems as well. Several street trees are planned, and the sidewalk will be extended along N. 8th street to the alley. A fence will be built around the property, probably 5' tall. The fence will be placed about 6' away from the sidewalk to give room for landscaping and the street trees to go on the outside of the fence.

Some people are concerned about glare from solar arrays. A fact-sheet (commissioned by the U.S. Department of Energy) is included that discusses this. The main take away points are that the glare from solar modules is less than other building materials and solar modules are designed with anti-reflective coatings in order to make them more efficient.



Proposed Outdoor Showroom for Groundhog Solar, 800 N. 4th Ave, Altoona (Juniata)





9TH

01.13-39.-024.00-000
ADAMS JOHN D
JR & KAREN M
01.13-39.-023.00-000
BOULWARE JAMES
R & DIANNE L

01.13-39.-039.00-000
WOLFORD MICHAEL
A & ELIZABETH

C-CB

01.13-39.-039.01-000
BOLLINGER TIMA
L (MCMULLEN)

01.13-39.-114.00-000
WALK GARY C JR

I-G

01.13-39.-038.00-000
GROUNDHOG SOLAR LLC

01.13-39.-115.02-000
HANAM REALTY LLC

County of Blair, PA

01.13-38.-024.01-000
WARD TRUCKING CORP

8TH

01.13-38.-021.00-000
A J PETTA
ENTERPRISE LLC

4TH

01.13-39.-021.00-000
POORMAN DWAYNE B

01.13-38.-020.00-000
A J PETTA
ENTERPRISE LLC
01.13-38.-019.00-000
DELEO THOMAS J

01.13-39.-009.00-000
FREDERICK FAMILY
LTD PARTNERS
01.13-39.-002.00-000
TURNBAUGH DAVID
R & BETSY A

01.13-39.-001.00-000
TURNBAUGH DAVID
R & BETSY A

4TH
AVENUE

R-L

01.13-30.-123.00-000
MAUK ROBERT A

01.13-30.-144.00-000
MAUK ROBERT A

01.13-30.-141.00-000
MAUK ROBERT A

01.13-30.-140.00-000
C&J RENTAL
MANAGEMENT LLC

01.13-38.-017.00-000
HENNEMAN TONI A
CR & COLLEEN J

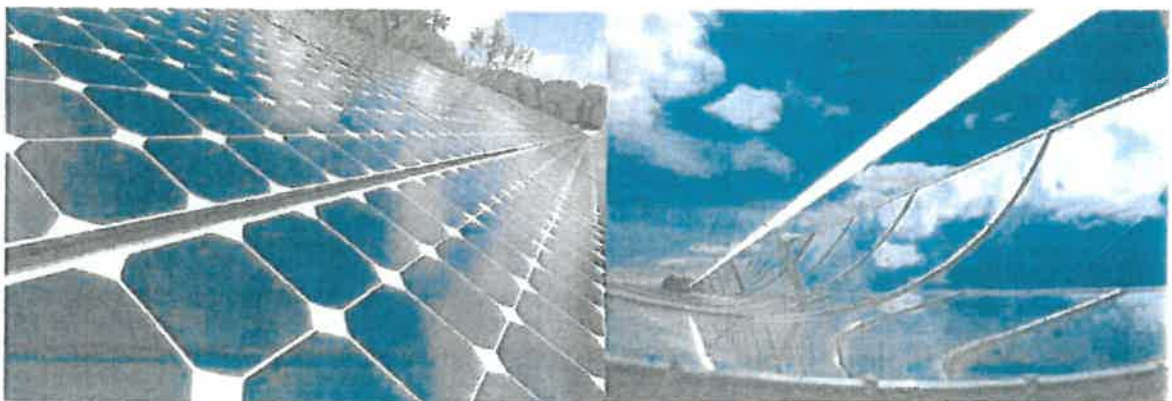
Solar and Glare



1. Introduction

A common misconception about solar photovoltaic (PV) panels is that they inherently cause or create "too much" glare, posing a nuisance to neighbors and a safety risk for pilots. While in certain situations the glass surfaces of solar PV systems can produce glint (a momentary flash of bright light) and glare (a reflection of bright light for a longer duration), light absorption, rather than reflection, is central to the function of a solar PV panel - to absorb solar radiation and convert it to electricity. Solar PV panels are constructed of dark-colored (usually blue or black) materials and are covered with anti-reflective coatings. Modern PV panels reflect as little as two percent of incoming sunlight, about the same as water and less than soil or even wood shingles (SEIA/Sandia 2013). Some of the concern and misconception is likely due to the confusion between solar PV systems and concentrated solar power (CSP) systems. CSP systems typically use an array of mirrors to reflect sunlight to heat water or other fluids to create steam that turns an electric generator. These typically involve large ground-mounted reflectors, usually in remote desert locations, and are not installed in residential or commercial areas or near airports.

Solar PV system on the left compared to a parabolic trough CSP system on the right. Photo Copyright: DOE/NREL/ORNL



Solar and Glare

As of June 2013, there were over 30 solar projects in operation at airports in 15 different states (Barrett 2013). Solar installations have been successfully located at or near US international airports in Boston, New York, San Francisco, and Denver, among others. Yet concerns over glint (a quick reflection) and glare (a longer reflection) often arise when a PV system is proposed on or near an airport. Pilots are familiar with both glint and glare as reflection is a common phenomenon, especially off of bodies of water or in the form of glare from the sun itself. However, issues can arise if the solar PV system were to cast glare into an air traffic control tower.¹

The Federal Aviation Administration (FAA) has been actively reviewing the impact of glare from solar panels to streamline an evaluation process that ensures safety while creating more opportunity for solar installations on or near airports. The FAA filed notice of its Interim Policy for review of solar energy systems on federally obligated airports (i.e. airports which receive federal funding) in October of 2013.² This policy requires that a sponsor of a federally obligated airport must request FAA review and approval to install solar on its "airport layout plan." Federally-obligated airports must also notify the FAA of its intent to construct any solar installation by filing FAA form 7460-1. The interim FAA policy also requires the use of the Solar Glare Hazard Analysis Tool for on-airport solar development.

III. FAA and the Solar Glare Hazard Analysis Tool

In order to understand and model glare in accordance with FAA standards, Sandia National Laboratories developed the Solar Glare Hazard Analysis Tool (SGHAT). Standardized safety metrics define what glare intensity will cause unwanted visual impacts to Air Traffic Control towers and airplane pilots. SGHAT can be used to evaluate the potential of a particular PV array to produce glare intensity, predicting when and where glare will occur from a prescribed PV array at user-defined observation points (i.e. from the Air Traffic Control Tower or from a series of points along an aircraft landing route) and be combined with Google maps for an easy user interface. In instances where glare may be a concern, the tool can prescribe minor adjustments to the tilt, direction, and location of the panels to alleviate any issues. SGHAT will predict annual energy production for the various adjusted positions (SEIA/Sandia PPT).

IV. Role for Local Governments

Local governments may wish to include airport guidance within their local zoning ordinances that address solar PV. The North Carolina Solar Center *Template Solar Energy Development Ordinance for North Carolina*³ includes a section on airports and recommends aviation notification steps for both on-airport solar projects and installations within 5 nautical miles of an airport. In addition to amendments to local zoning codes, local governments have the opportunity to conduct outreach to airports,

¹ <http://www.unionleader.com/article/20120830/NEWS02/708309966/0/newhampshire>

² <http://www.gpo.gov/fdsys/pkg/FR-2013-10-23/pdf/2013-24729.pdf>

³ http://ncsc.ncsu.edu/wp-content/uploads/Template-Solar-Ordinance_V1.0_12-18-13.pdf



Solar and Glare

organizations and local stakeholders about methods for predicting and managing glare impacts from solar panels near airports or other locations. Such outreach furthers the safety goals of the FAA and the solar energy development goals of municipalities and communities. Spreading awareness of the safety of PV systems along with FAA guidance and glare measurement tools will help foster informed communities and enable the deployment of safe and productive solar PV projects in locations where glint and glare may be of concern.

Sandia Solar Glare Mapping Tools: <https://share.sandia.gov/phlux>

Barrett, S., June 2013, Glare Factor: Solar Installations And Airports, *Solar Industry*, Volume 6, Number 5. http://www.solarindustrymag.com/issues/SI1306/FEAT_02_Glare_Factor.html.

Federal Register 2013, etc.: <http://www.gpo.gov/fdsys/pkg/FR-2013-10-23/pdf/2013-24729.pdf>

SEIA/Sandia Webinar on Solar PV and Glare:

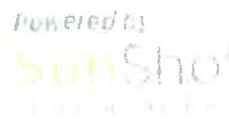
<http://www.seia.org/sites/default/files/resources/Final%20FAA%20Webinar%20Slides%20August%202013.pdf>

Authors: *Caroline Palmer and Chad Laurent, Meister Consultants Group, Inc.*

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1301 12TH STREET, SUITE 103
ALTOONA, PA 16601
(814) 949-2456

ZONING APPEAL APPLICATION – ALTOONA PLANNING CODE

(INSTRUCTIONS LOCATED ON REVERSE SIDE)

| |
|--|
| PROPERTY LOCATION: 2216 Pleasant Valley Blvd Altoona, PA 16602 |
| PURPOSE OF APPEAL: We would like to add a digital/marquee sign to our current sign. It would hang below our current sign and show information about our car wash. |
| DESCRIPTION OF PREMISES: Car Wash |
| USE OF PREMISES: Car Wash |
| OFF-STREET PARKING: N/A |

PLEASE FILL IN ALL PORTIONS BELOW, "SAME" AND "NON-APPLICABLE" IF NEEDED

PROPERTY OWNER INFORMATION

| | |
|---------------------------------------|----------------------------|
| NAME: 2B Development, LLC | |
| ADDRESS: PO Box 674 Bedford, PA 15522 | |
| PHONE: 814-624-3119 | EMAIL: don@qneautowash.com |

APPLICANT INFORMATION

| | |
|---------------------------------------|----------------------------|
| NAME: Don Brown | |
| ADDRESS: PO Box 674 Bedford, PA 15522 | |
| PHONE: 814-624-3119 | EMAIL: don@qneautowash.com |

DESIGN PROFESSIONAL INFORMATION

| | |
|----------------------|--------|
| NAME: Non-Applicable | |
| ADDRESS: | |
| PHONE: | EMAIL: |

Donell B. Brown
SIGNATURE OF APPLICANT

8-7-23
DATE

OFFICE USE ONLY

| | | |
|--|---|--------------------------------|
| <input type="checkbox"/> VARIANCE \$500.00 | <input type="checkbox"/> APPEAL DETERMINATION \$500.00 | <input type="checkbox"/> OTHER |
| <input type="checkbox"/> SPECIAL EXCEPTION \$500.00 | <input type="checkbox"/> APPEAL VIOLATION NOTICE \$500.00 | |
| PREVIOUS APPEAL TO ZONING HEARING BOARD? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN | | |
| SECTIONS AND PROVISIONS OF ZONING ORDINANCE RELIED UPON: | | |
| | | |
| | | |

Quick'n Easy Sign Narrative

We would like to install a digital/marquee sign to hang below our current sign. The sign's dimensions are 8.66ft by 3.94ft. It will display messages to our customers such as: Special today...\$1.00 off all washes, get our app and save money, Remove salt for the life of your car, Powerful vacuums, or messages encouraging our local sports teams such as Bishop Guilfoyle, and it also displays the normal date, time, and temperature. The sign also has the feature to dim itself at night so it will not disturb our neighbors. I have included a picture below of our current sign where I have indicated where the new sign will go.



